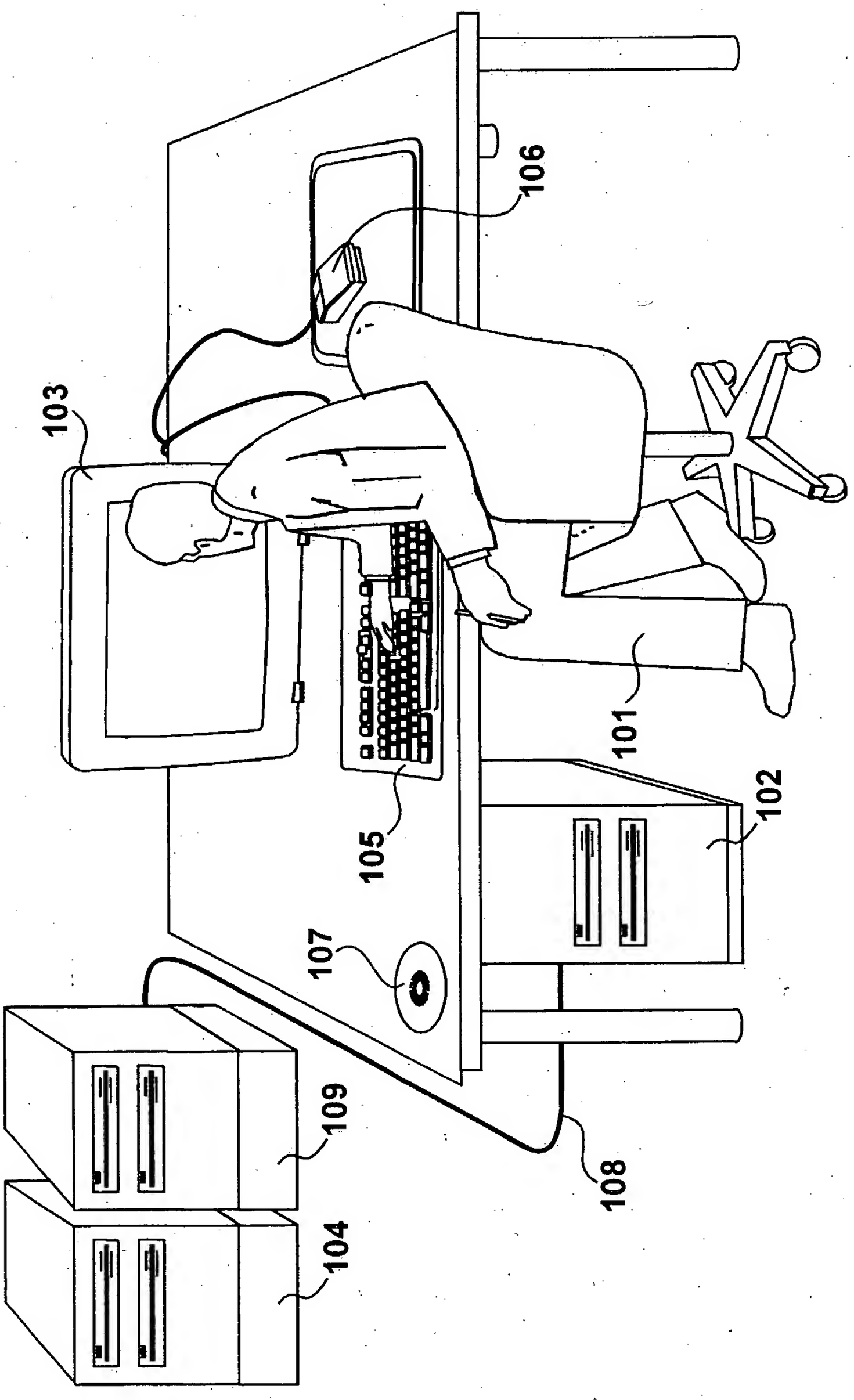


Figure 1

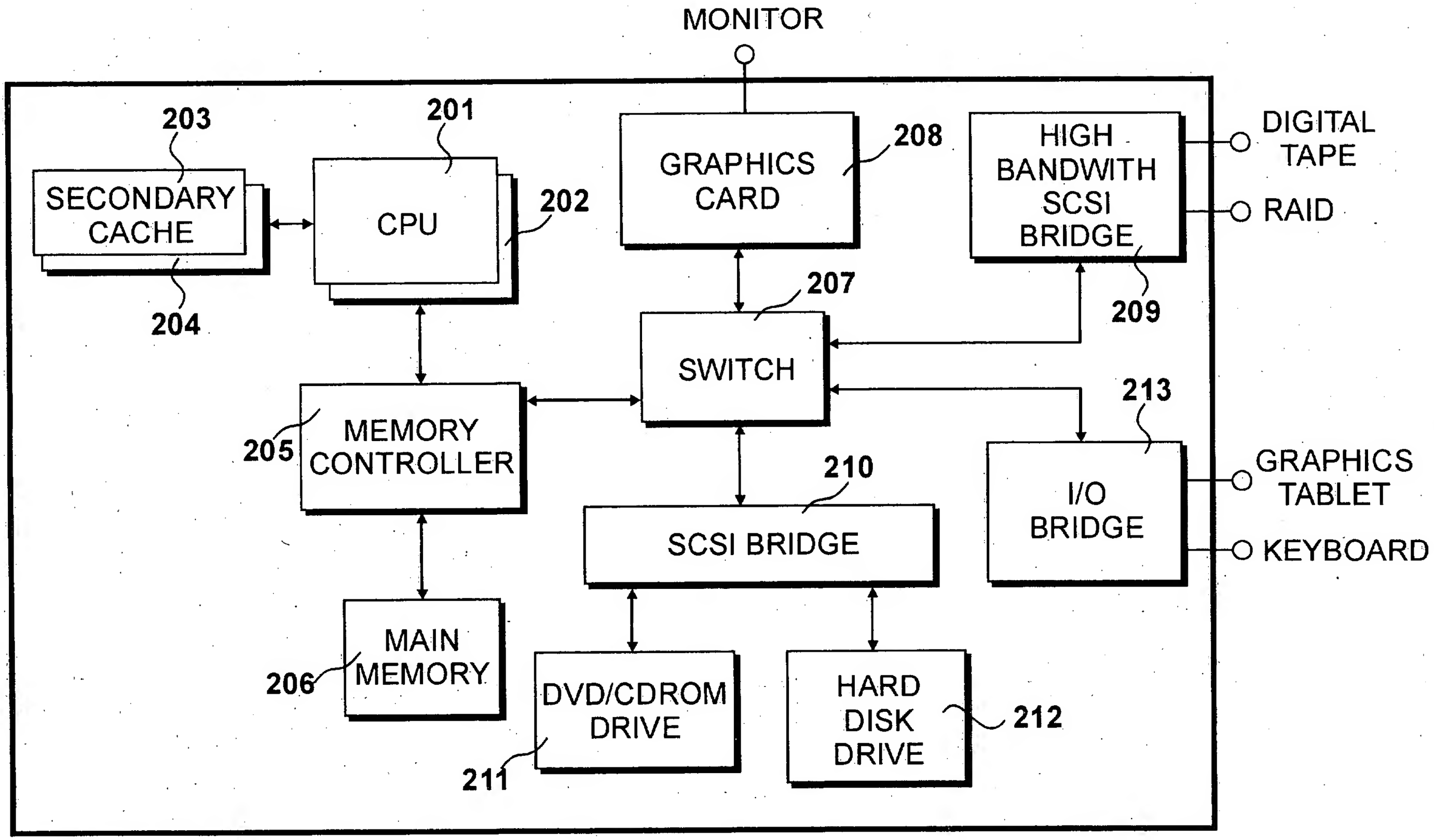
MONITOR
203
SECONDARY CACHE
204
201
CPU
202
GRAPHICS CARD
208
HIGH BANDWITH SCSI BRIDGE
209
DIGITAL TAPE
RAID
207
SWITCH
205
MEMORY CONTROLLER
213
I/O BRIDGE
GRAPHICS TABLET
KEYBOARD
210
SCSI BRIDGE
206
MAIN MEMORY
DVD/CDROM DRIVE
211
HARD DISK DRIVE
212

*Figure 2*

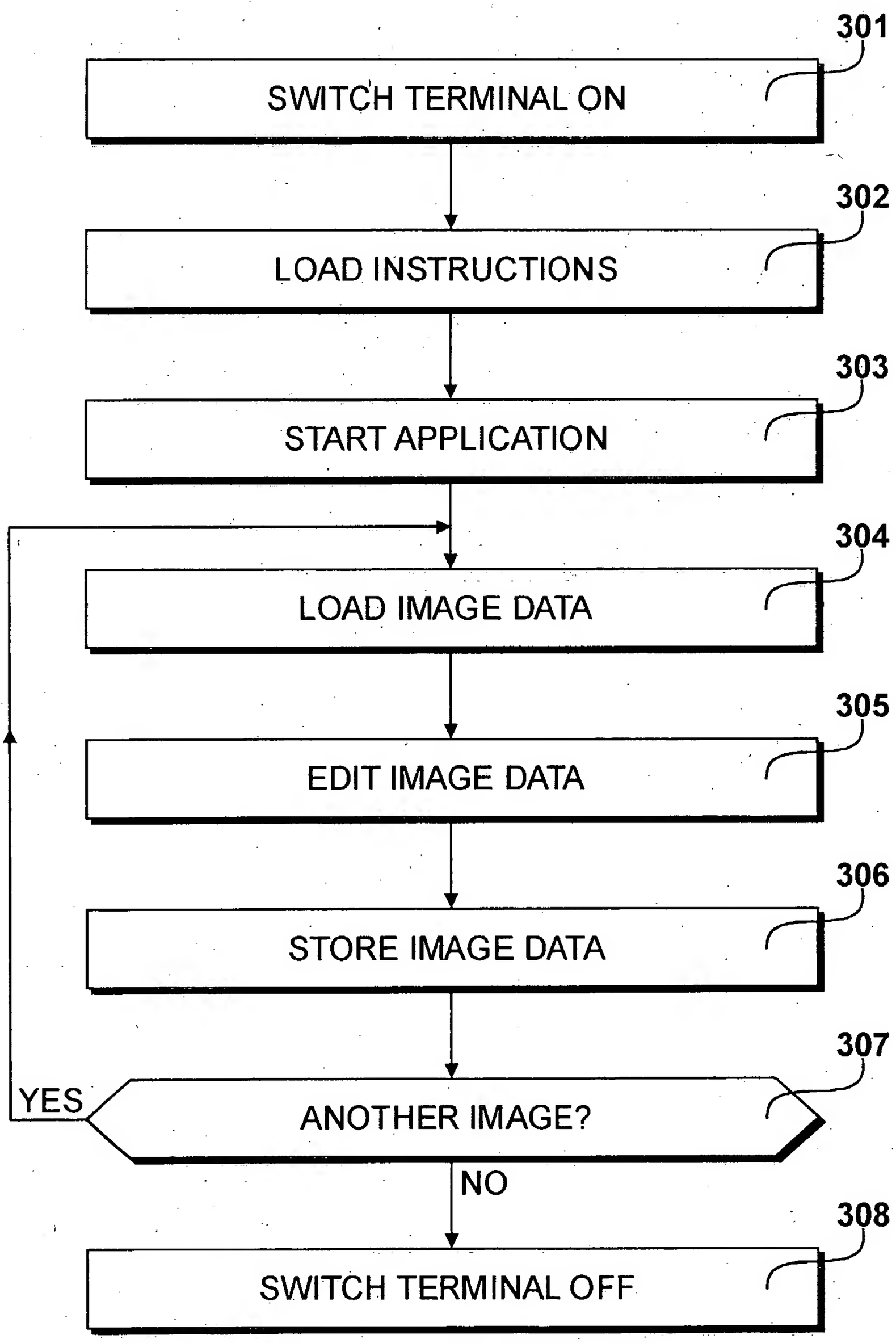
301
SWITCH TERMINAL ON
302
LOAD INSTRUCTIONS
303
START APPLICATION
304
LOAD IMAGE DATA
305
EDIT IMAGE DATA
306
STORE IMAGE DATA
307
ANOTHER IMAGE?
YES
NO
308
SWITCH TERMINAL OFF

*Figure 3*

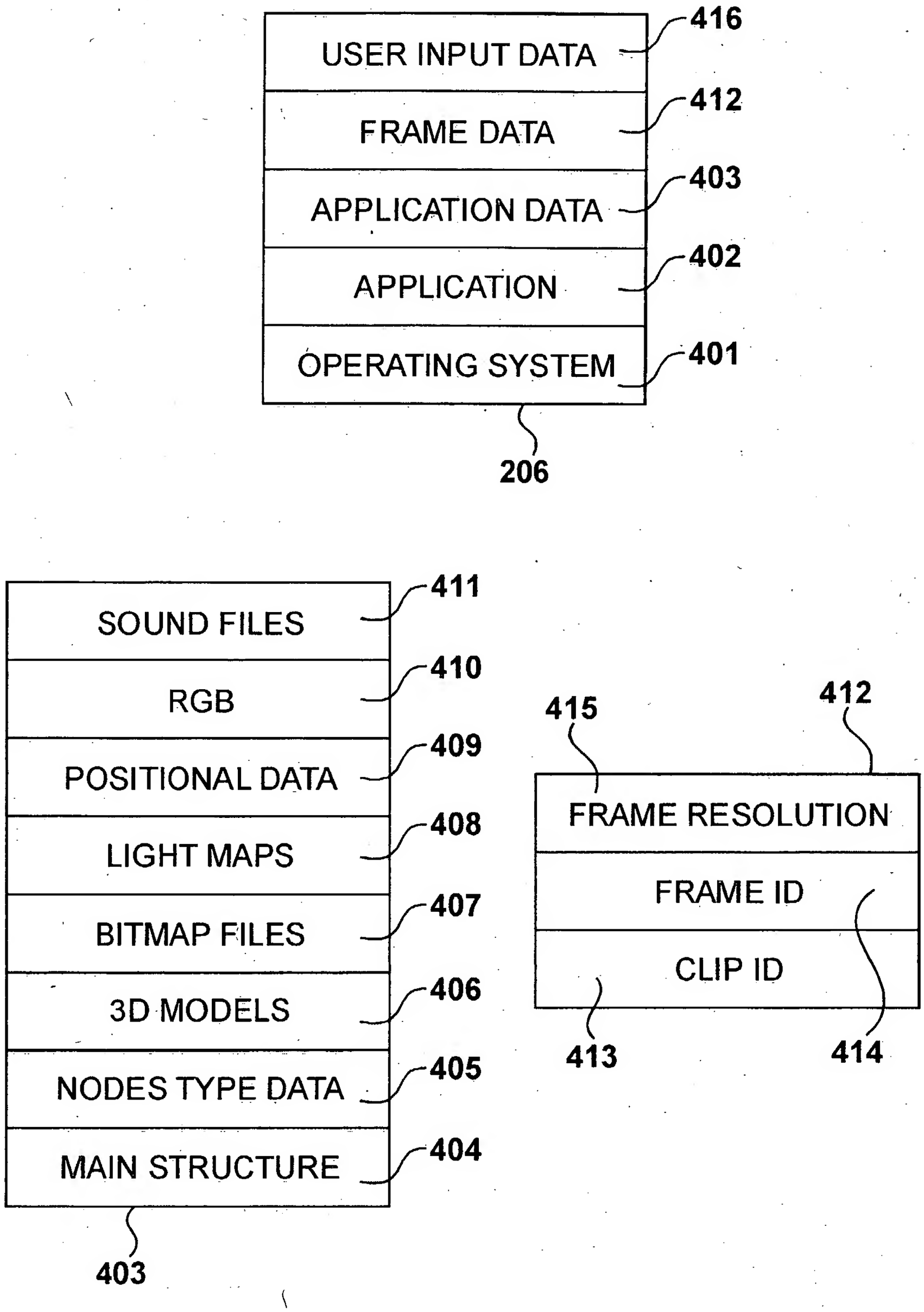
USER INPUT DATA
416
FRAME DATA
412
APPLICATION DATA
403
APPLICATION
402
OPERATING SYSTEM
401
206
SOUND FILES
411
RGB
410
POSITIONAL DATA
409
LIGHT MAPS
408
BITMAP FILES
407
3D MODELS
406
NODES TYPE DATA
405
MAIN STRUCTURE
404
403
415
412
FRAME RESOLUTION
FRAME ID
CLIP ID
413
414

*Figure 4*

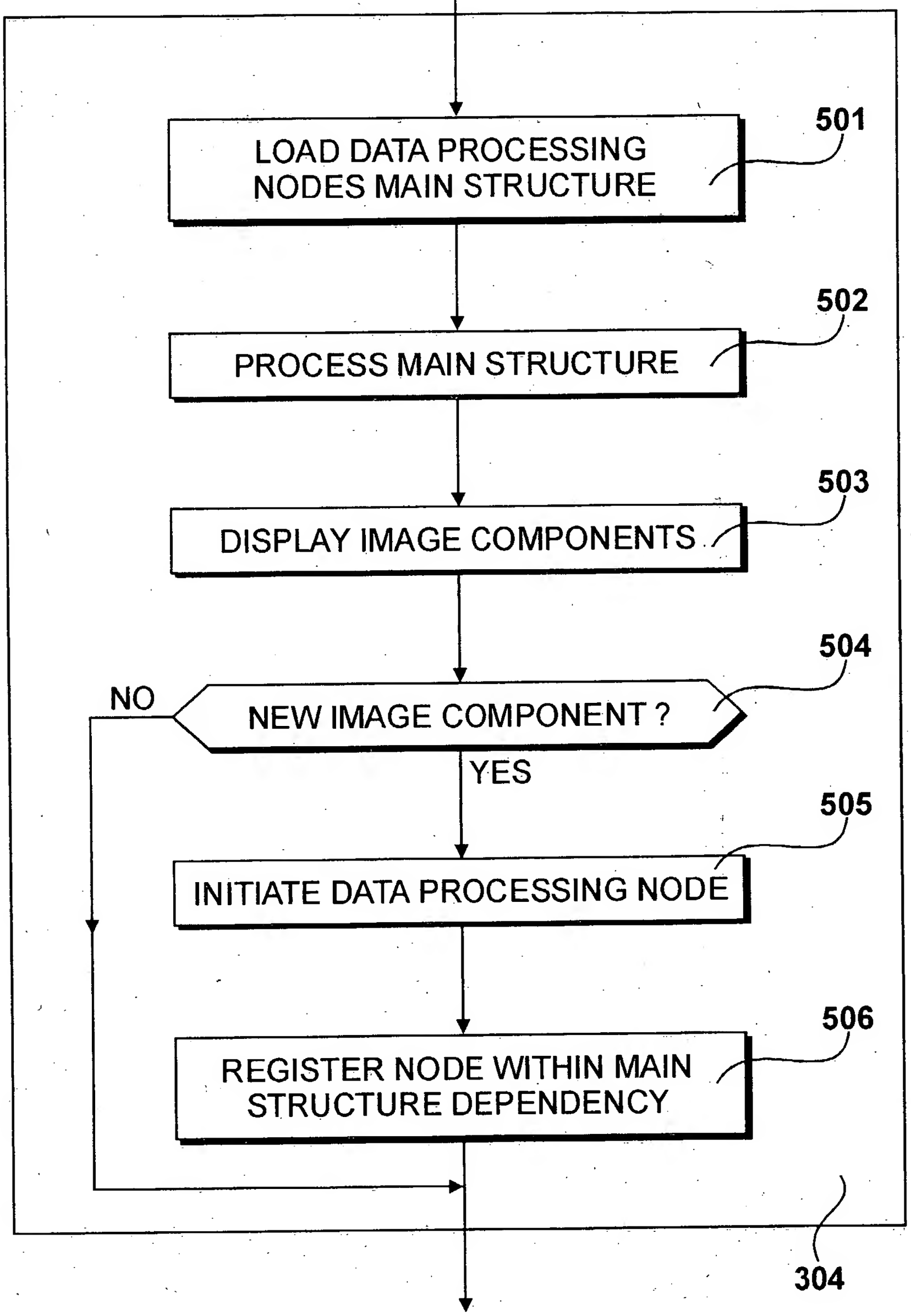
LOAD DATA PROCESSING NODES MAIN STRUCTURE
501
PROCESS MAIN STRUCTURE
502
DISPLAY IMAGE COMPONENTS
503
NEW IMAGE COMPONENT ?
504
NO
YES
INITIATE DATA PROCESSING NODE
505
REGISTER NODE WITHIN MAIN STRUCTURE DEPENDENCY
506
304

*Figure 5*

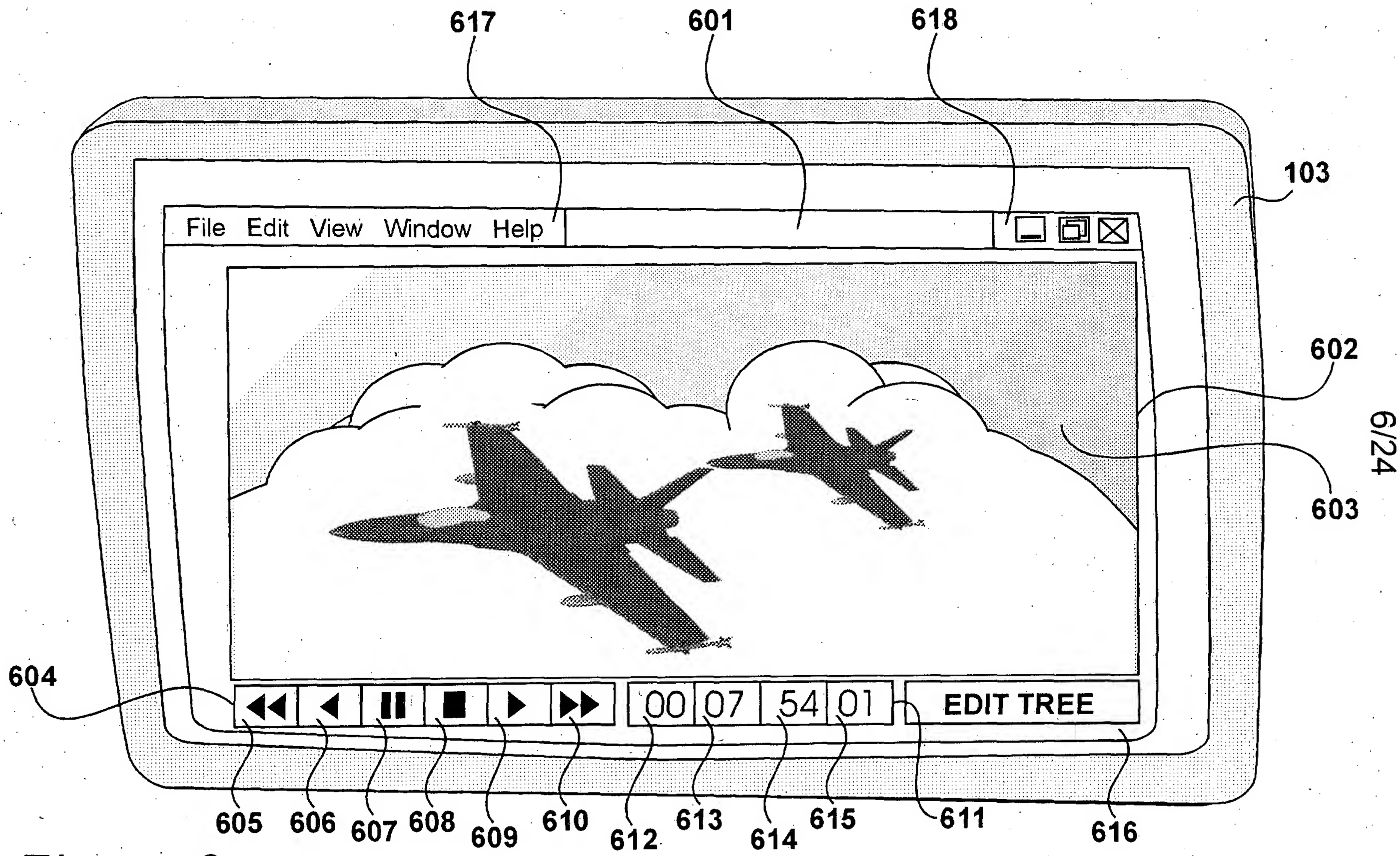
617
601
618
103
File Edit View Window Help
602
603
604
00 07 54 01
EDIT TREE
605
606
607
608
609
610
612
613
614
615
611
616

Figure 6

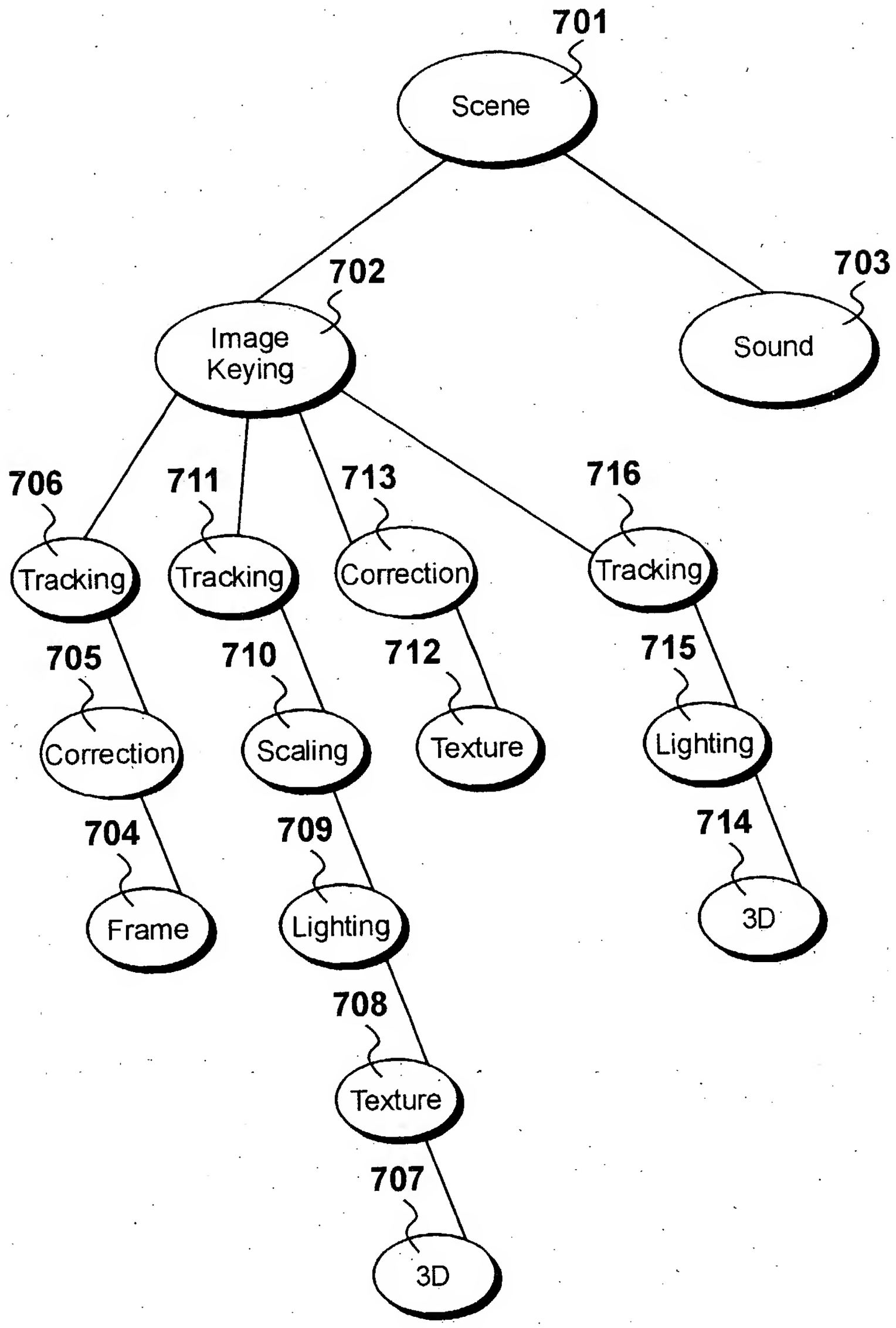
701
Scene
702
Image Keying
703
Sound
706
Tracking
711
Tracking
713
Correction
716
Tracking
705
Correction
710
Scaling
712
Texture
715
Lighting
704
Frame
709
Lighting
714
3D
708
Texture
707
3D

*Figure 7*

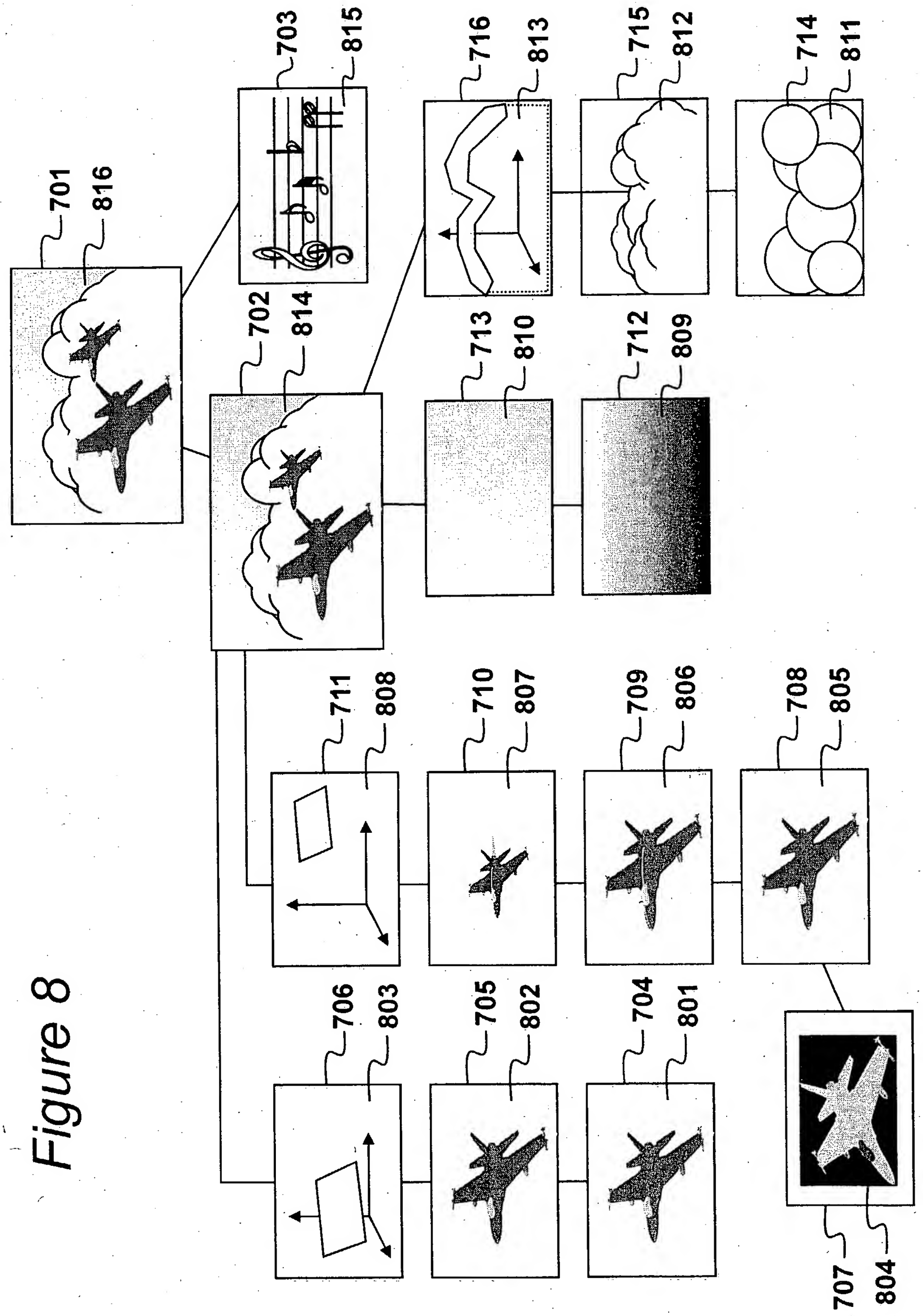
701
816
703
815
716
813
715
812
714
811
702
814
713
810
712
809
711
808
710
807
709
806
708
805
706
803
705
802
704
801
707
804

Figure 8

| 901 NODE ID | 908 PARENT | 902 | 909 CHILD | 903 | 904 NODE TYPE | 905 NODE DATA |
|---|---|---|---|---|---|---|
| 906 0001 | 0002:0016 | | — | | SCENE OUTPUT | ALL |
| 907 0002 | 0003:0015 | | 0001 | | KEYER | RGB |
| 0003 | 0004:0005 | | 0002 | | TRACKER | VECTOR |
| 0004 | 0005 | | 0003 | | SUPPRESS | RGB |
| 0005 | — | | 0004 | | FRAME | RGB |
| 0006 | 0007:0010 | | 0002 | | TRACKER | VECTOR |
| 0007 | 0008:0010 | | 0006 | | SCALE | VECTOR |
| 0008 | 0009:0010 | | 0007 | | LIGHTING | LIGHT MAP |
| 0009 | 0010 | | 0008 | | TEXTURE | BITMAP |
| 0010 | — | | 0009 | | MODELER | 3D MODEL |
| 0011 | 0012 | | 0002 | | SUPPRESS | RGB |
| 0012 | — | | 0011 | | TEXTURE | BITMAP |
| 0013 | 0014:0015 | | 0002 | | TRACKER | VECTOR |
| 0014 | 0015 | | 0013 | | LIGHTING | LIGHT MAP |
| 0015 | — | | 0014 | | MODELER | 3D MODEL |
| 0016 | — | | 0001 | | MIXER | SOUND FILE |

404

*Figure 9*

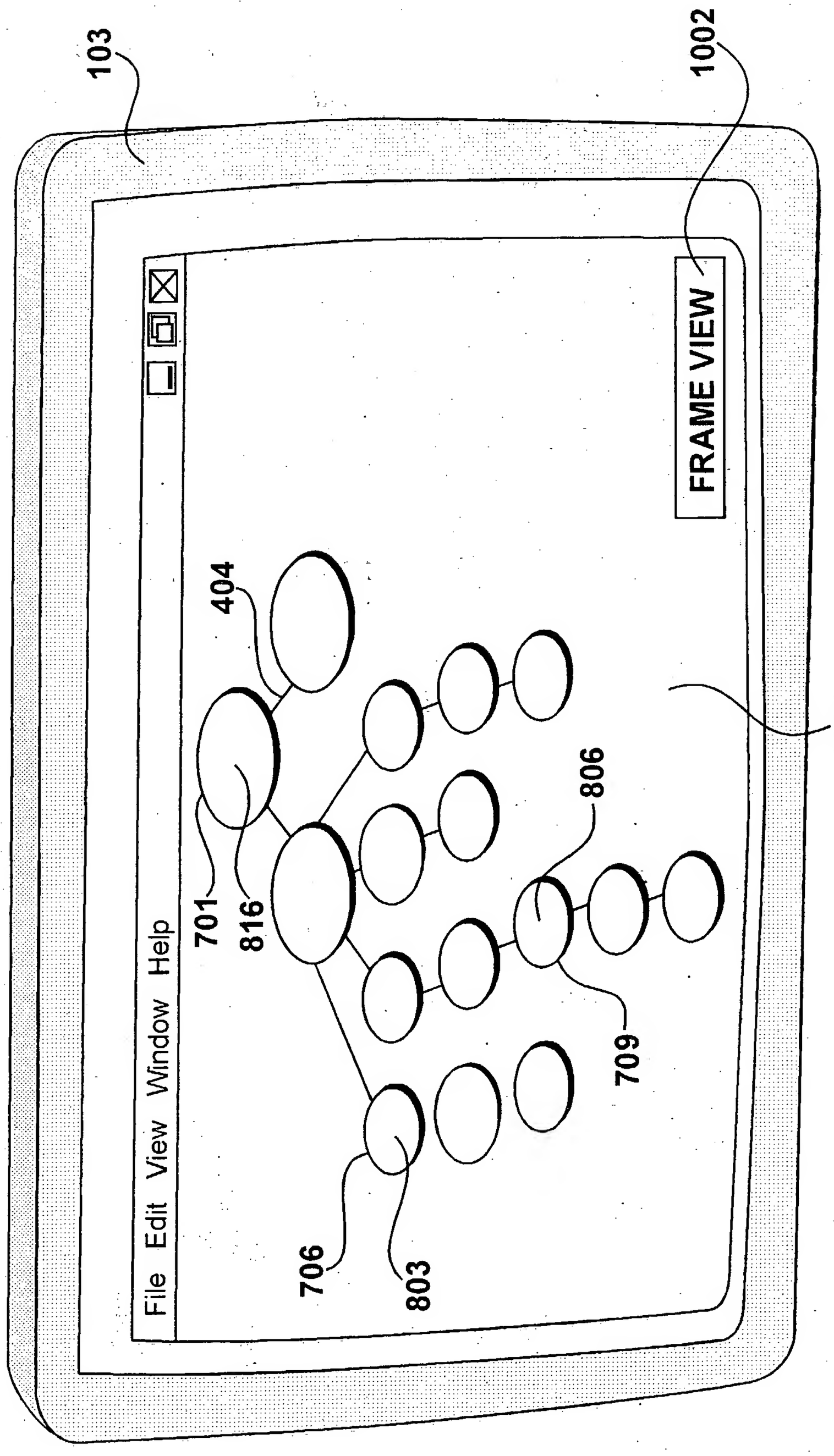
103
1002
File Edit View Window Help
FRAME VIEW
404
701
816
806
1001
709
706
803

Figure 10

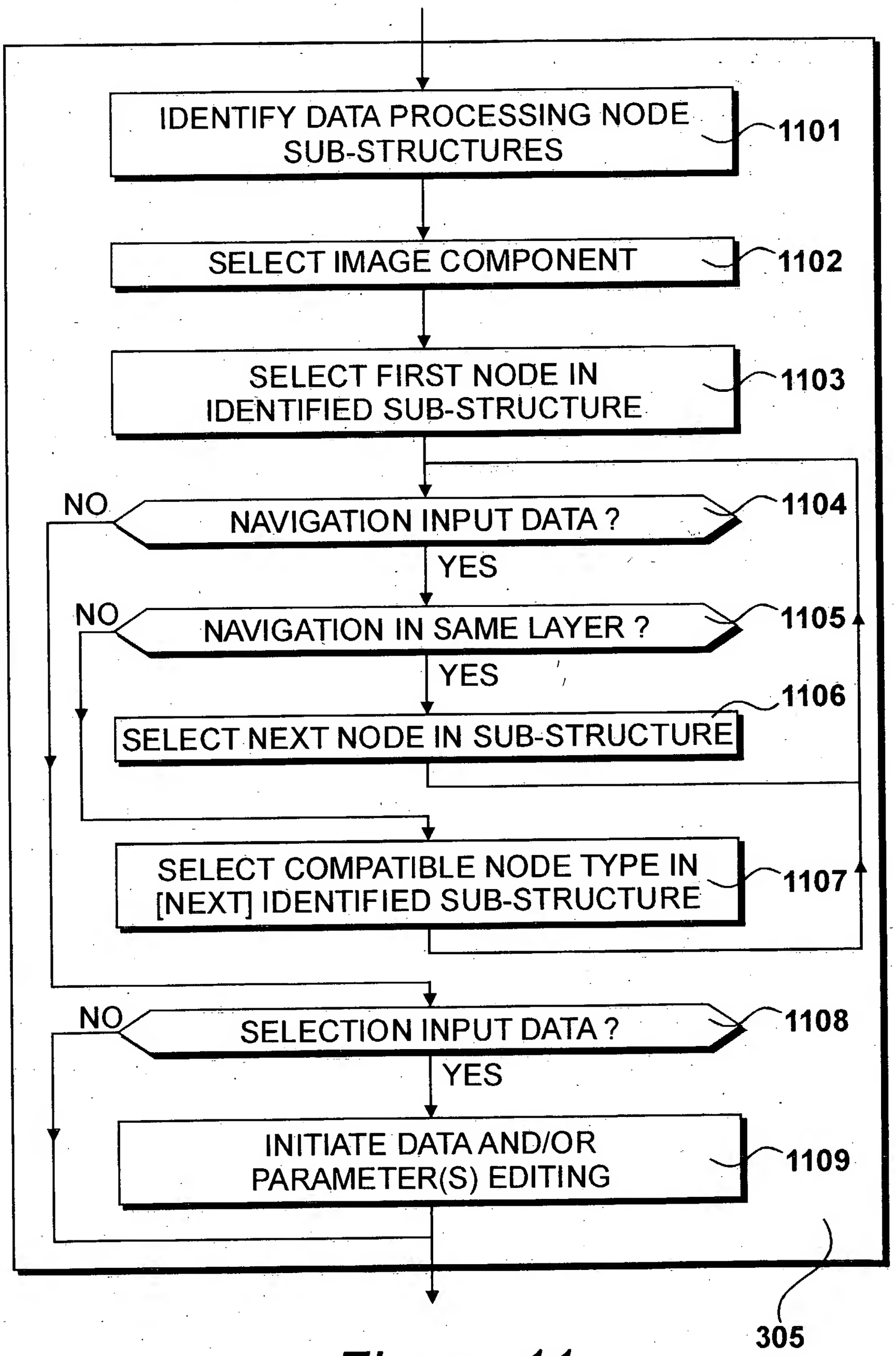
IDENTIFY DATA PROCESSING NODE SUB-STRUCTURES
1101
SELECT IMAGE COMPONENT
1102
SELECT FIRST NODE IN IDENTIFIED SUB-STRUCTURE
1103
NO
NAVIGATION INPUT DATA ?
1104
YES
NO
NAVIGATION IN SAME LAYER ?
1105
YES
1106
SELECT NEXT NODE IN SUB-STRUCTURE
SELECT COMPATIBLE NODE TYPE IN [NEXT] IDENTIFIED SUB-STRUCTURE
1107
NO
SELECTION INPUT DATA ?
1108
YES
INITIATE DATA AND/OR PARAMETER(S) EDITING
1109
305

*Figure 11*

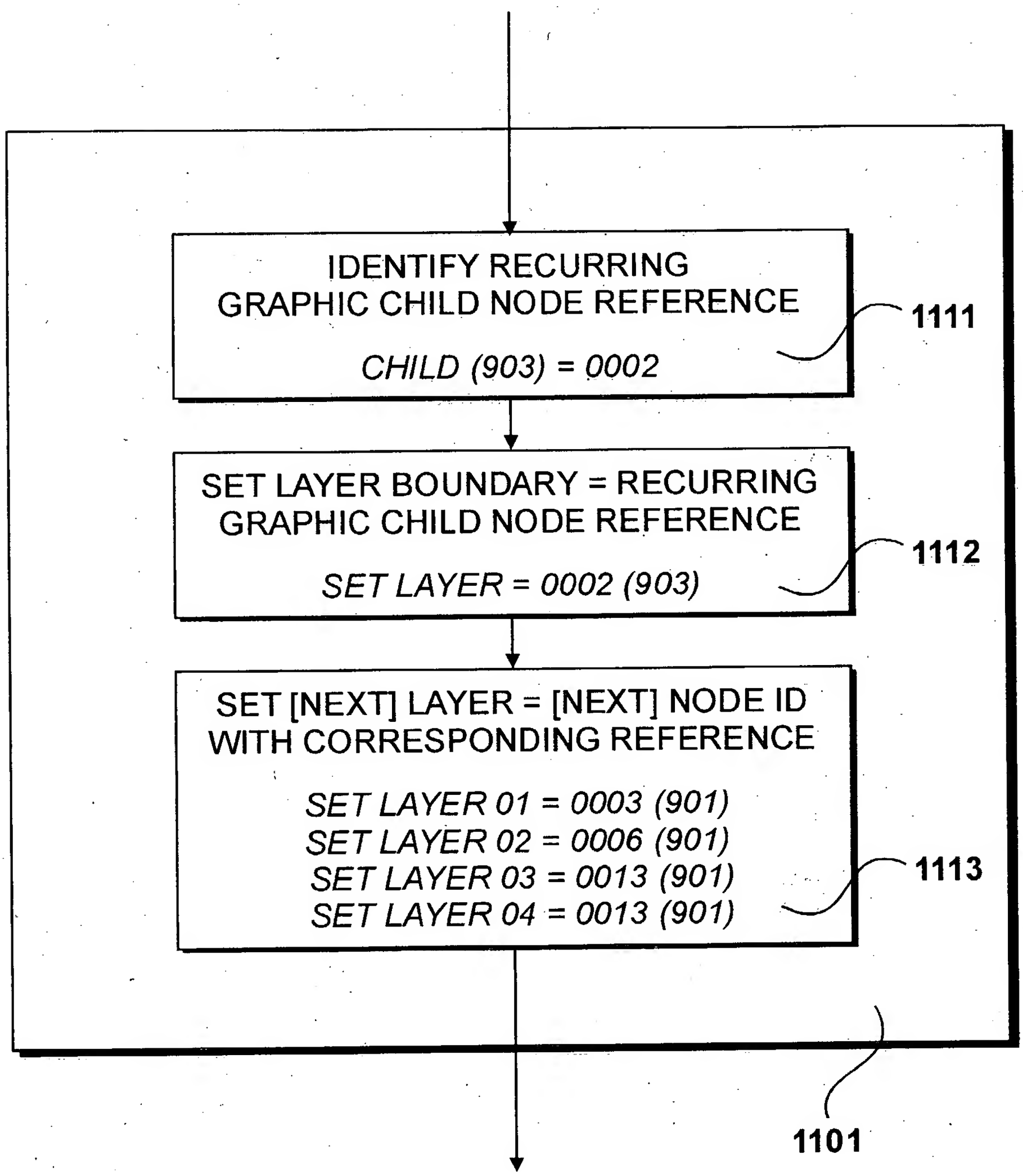
IDENTIFY RECURRING GRAPHIC CHILD NODE REFERENCE
CHILD (903) = 0002
1111
SET LAYER BOUNDARY = RECURRING GRAPHIC CHILD NODE REFERENCE
SET LAYER = 0002 (903)
1112
SET [NEXT] LAYER = [NEXT] NODE ID WITH CORRESPONDING REFERENCE
SET LAYER 01 = 0003 (901)
SET LAYER 02 = 0006 (901)
SET LAYER 03 = 0013 (901)
SET LAYER 04 = 0013 (901)
1113
1101

Figure 11A

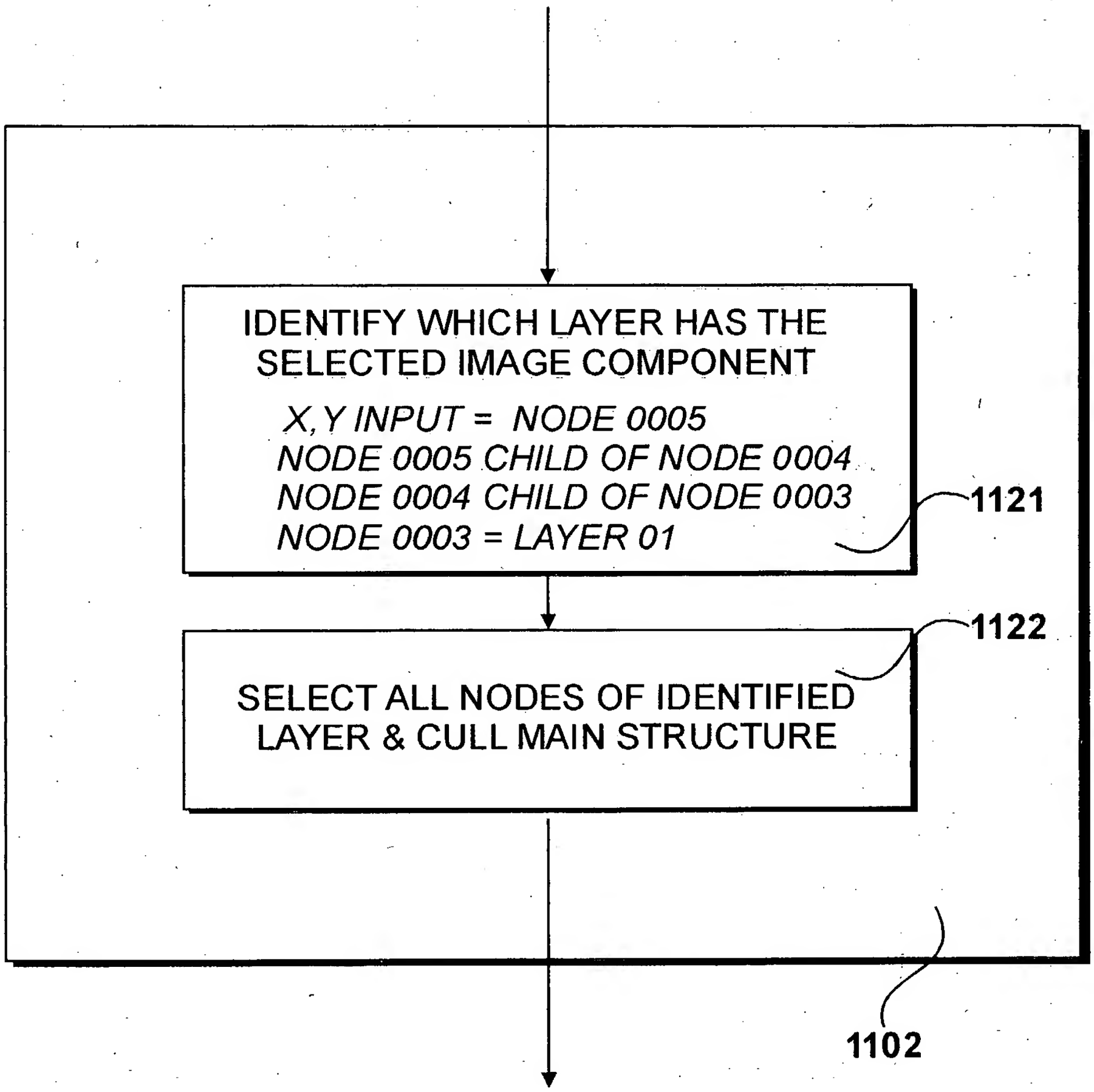
IDENTIFY WHICH LAYER HAS THE SELECTED IMAGE COMPONENT
X,Y INPUT = NODE 0005
NODE 0005 CHILD OF NODE 0004
NODE 0004 CHILD OF NODE 0003
NODE 0003 = LAYER 01
1121
SELECT ALL NODES OF IDENTIFIED LAYER & CULL MAIN STRUCTURE
1122
1102

Figure 11B

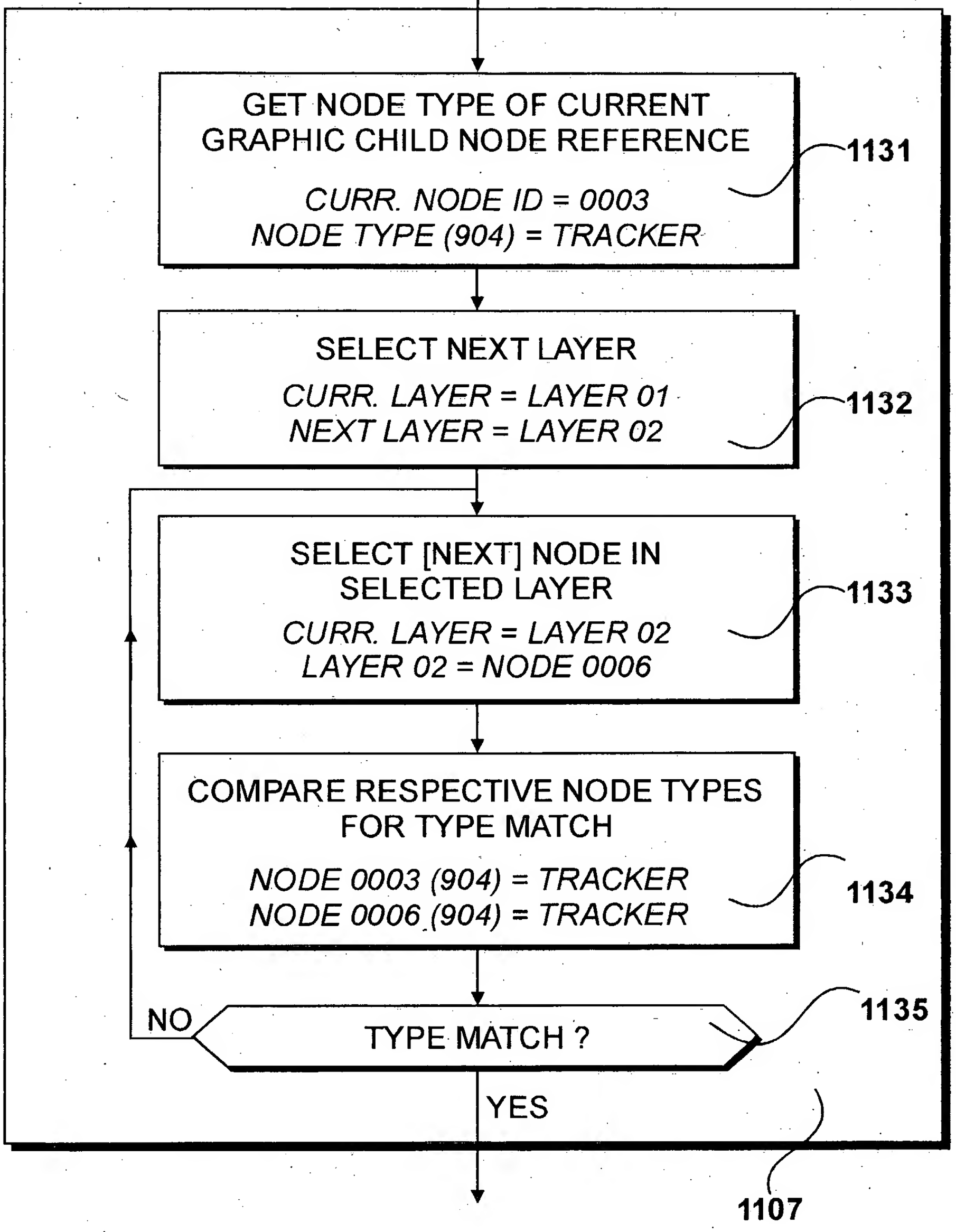
GET NODE TYPE OF CURRENT GRAPHIC CHILD NODE REFERENCE
CURR. NODE ID = 0003
NODE TYPE (904) = TRACKER
1131
SELECT NEXT LAYER
CURR. LAYER = LAYER 01
NEXT LAYER = LAYER 02
1132
SELECT [NEXT] NODE IN SELECTED LAYER
CURR. LAYER = LAYER 02
LAYER 02 = NODE 0006
1133
COMPARE RESPECTIVE NODE TYPES FOR TYPE MATCH
NODE 0003 (904) = TRACKER
NODE 0006 (904) = TRACKER
1134
NO
TYPE MATCH ?
1135
YES
1107

Figure 11C

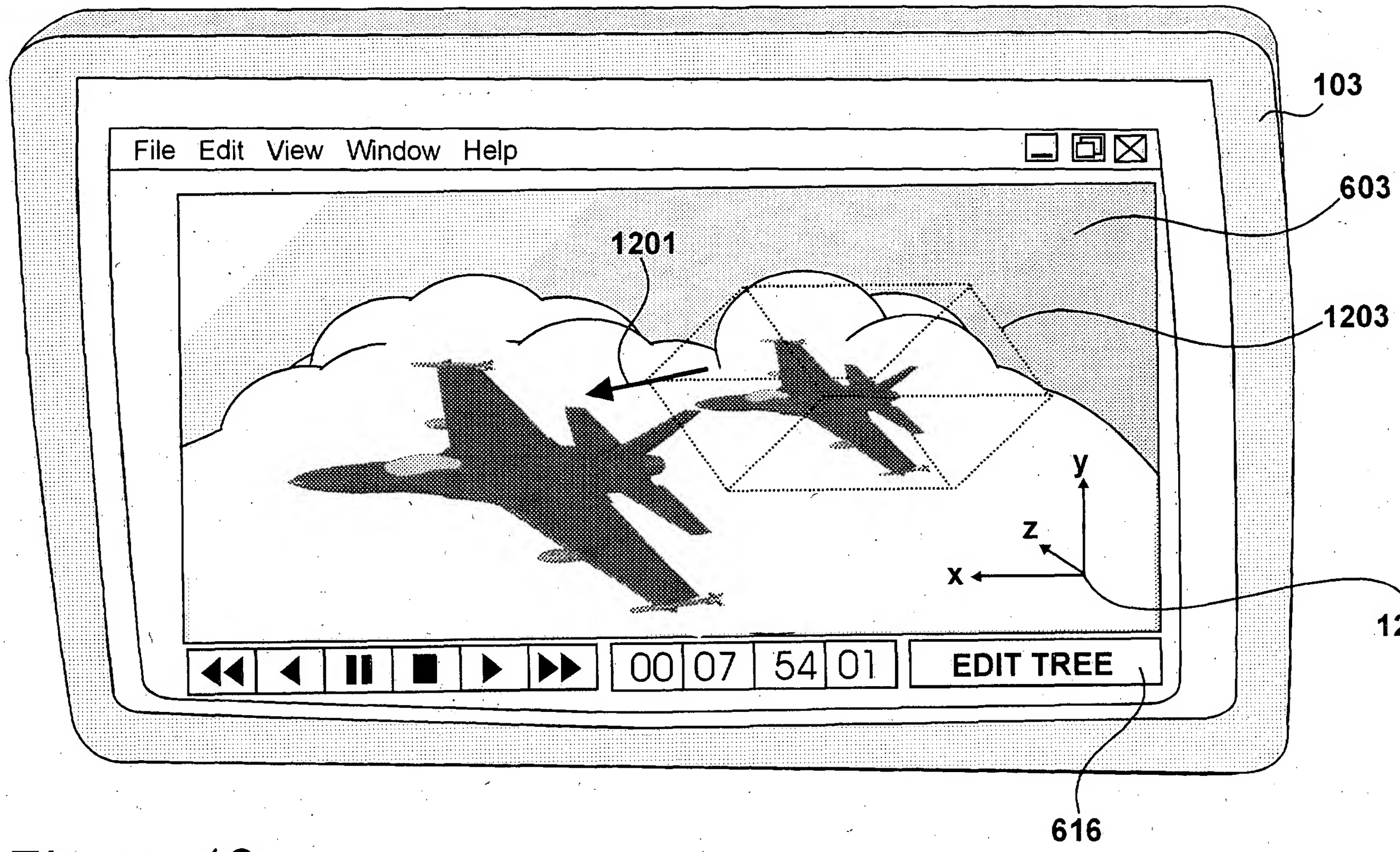
File Edit View Window Help
1201
103
603
1203
y
z
x
1202
00 07 54 01
EDIT TREE
616

Figure 12

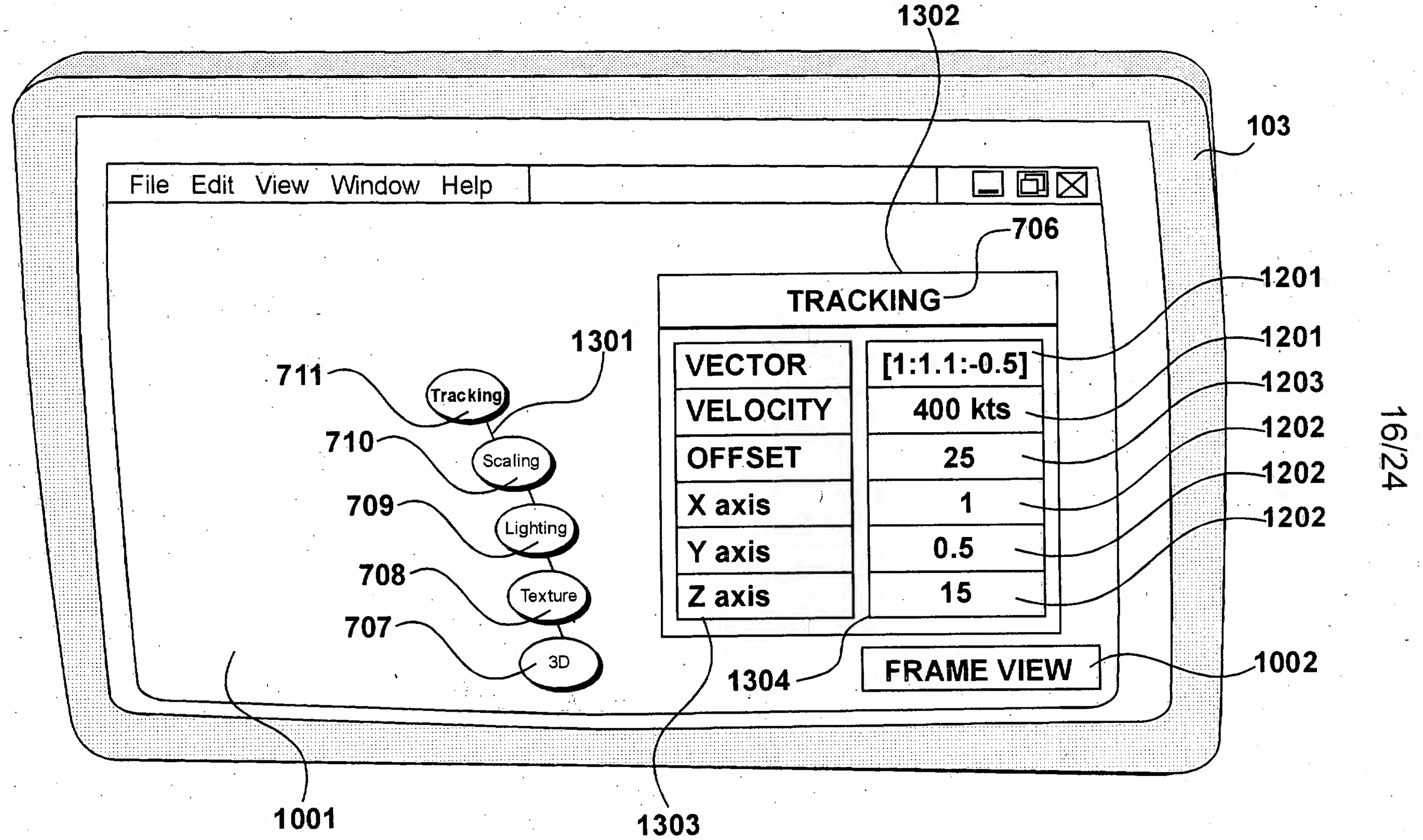
1302
103
File Edit View Window Help
706
TRACKING
1201
1201
1203
1202
1202
1202
1301
711
Tracking
710
Scaling
709
Lighting
708
Texture
707
3D
VECTOR
[1:1.1:-0.5]
VELOCITY
400 kts
OFFSET
25
X axis
1
Y axis
0.5
Z axis
15
1304
FRAME VIEW
1002
1001
1303

Figure 13

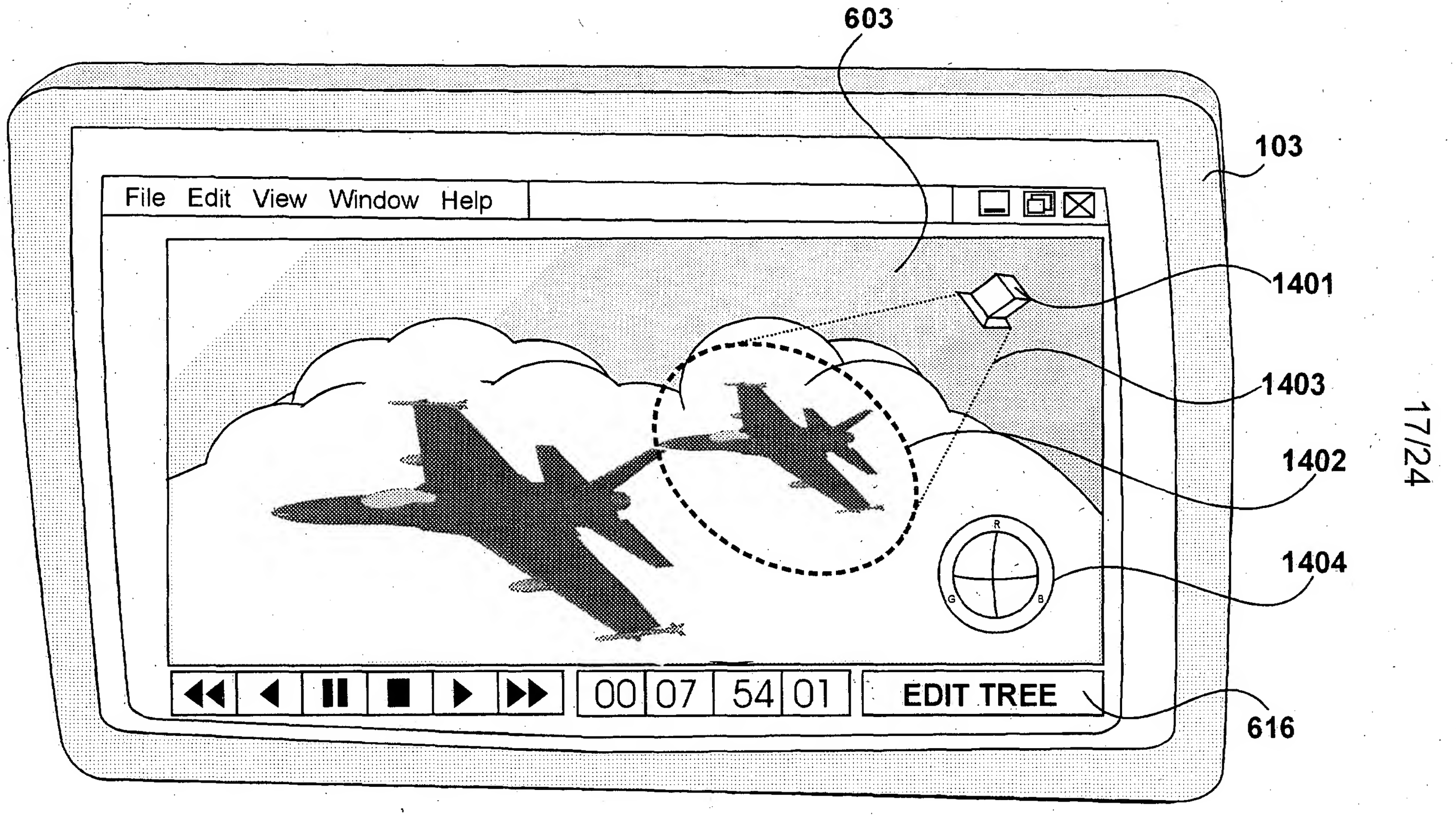
603
103
File Edit View Window Help
1401
1403
1402
1404
R
G
B
00 07 54 01
EDIT TREE
616

Figure 14

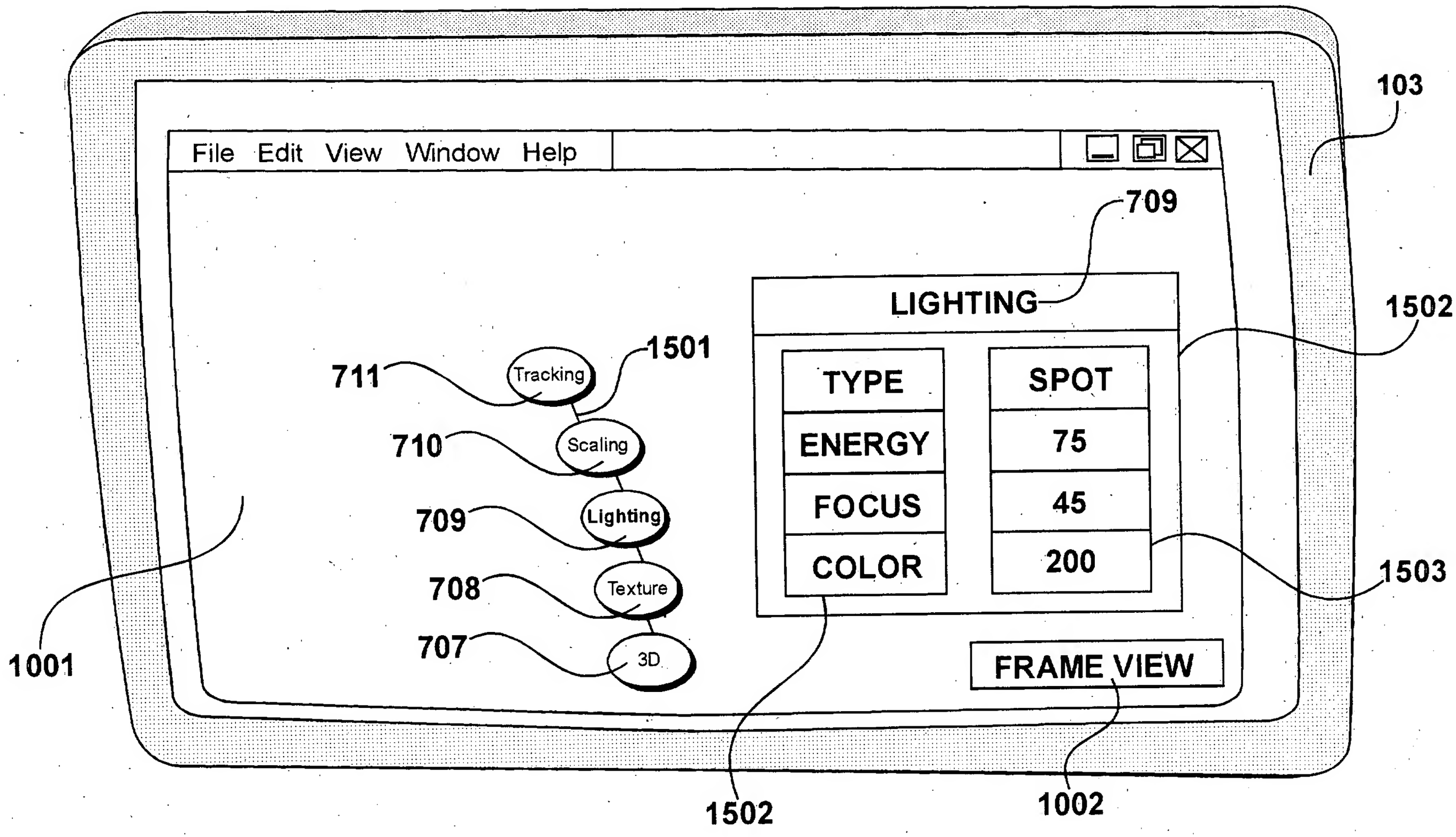
File Edit View Window Help
103
709
LIGHTING
1502
TYPE
SPOT
ENERGY
75
FOCUS
45
COLOR
200
1503
711
Tracking
1501
710
Scaling
709
Lighting
708
Texture
707
3D
1001
FRAME VIEW
1502
1002

*Figure 15*

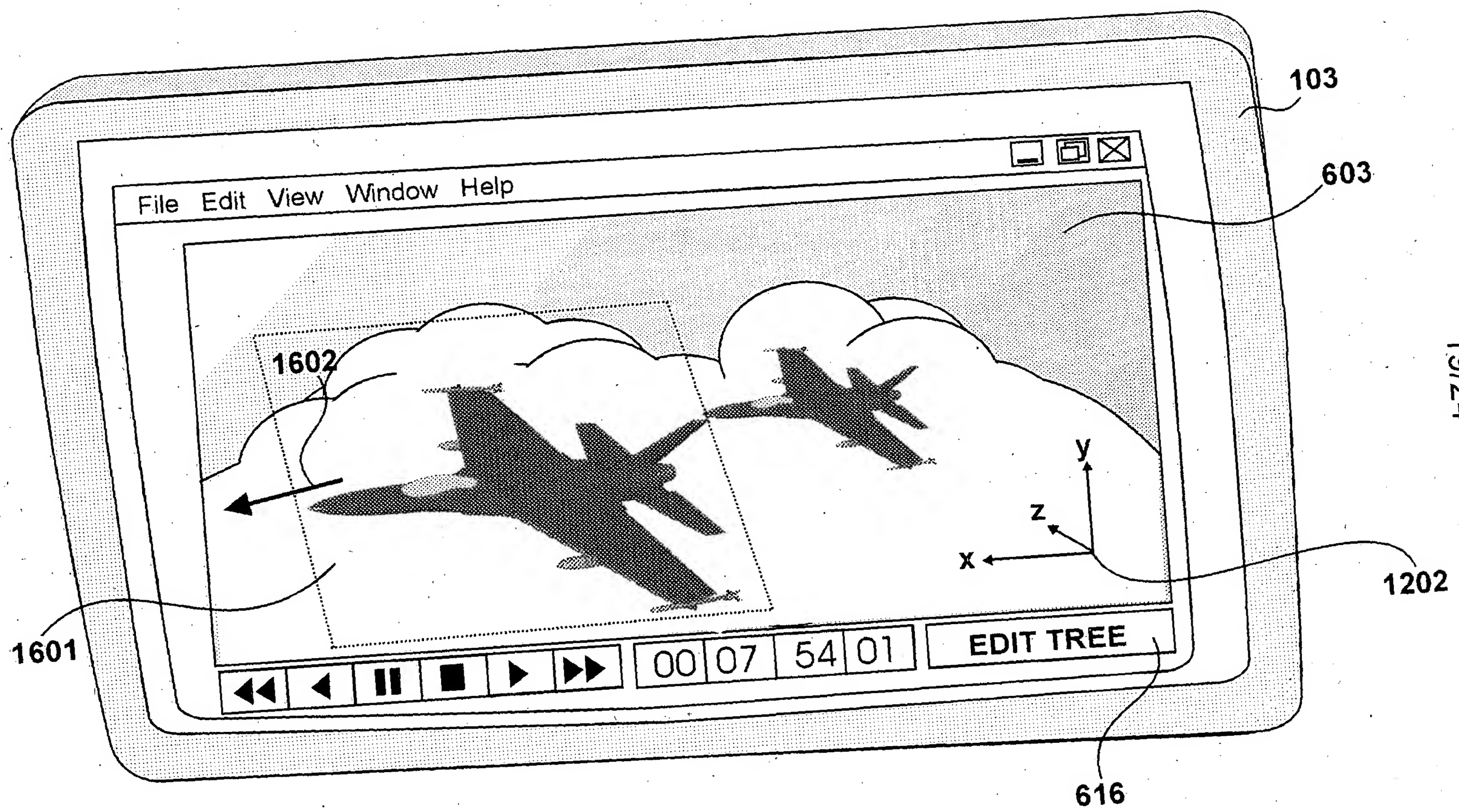
103
603
File Edit View Window Help
1602
y
z
x
1202
1601
00 07 54 01
EDIT TREE
616

Figure 16

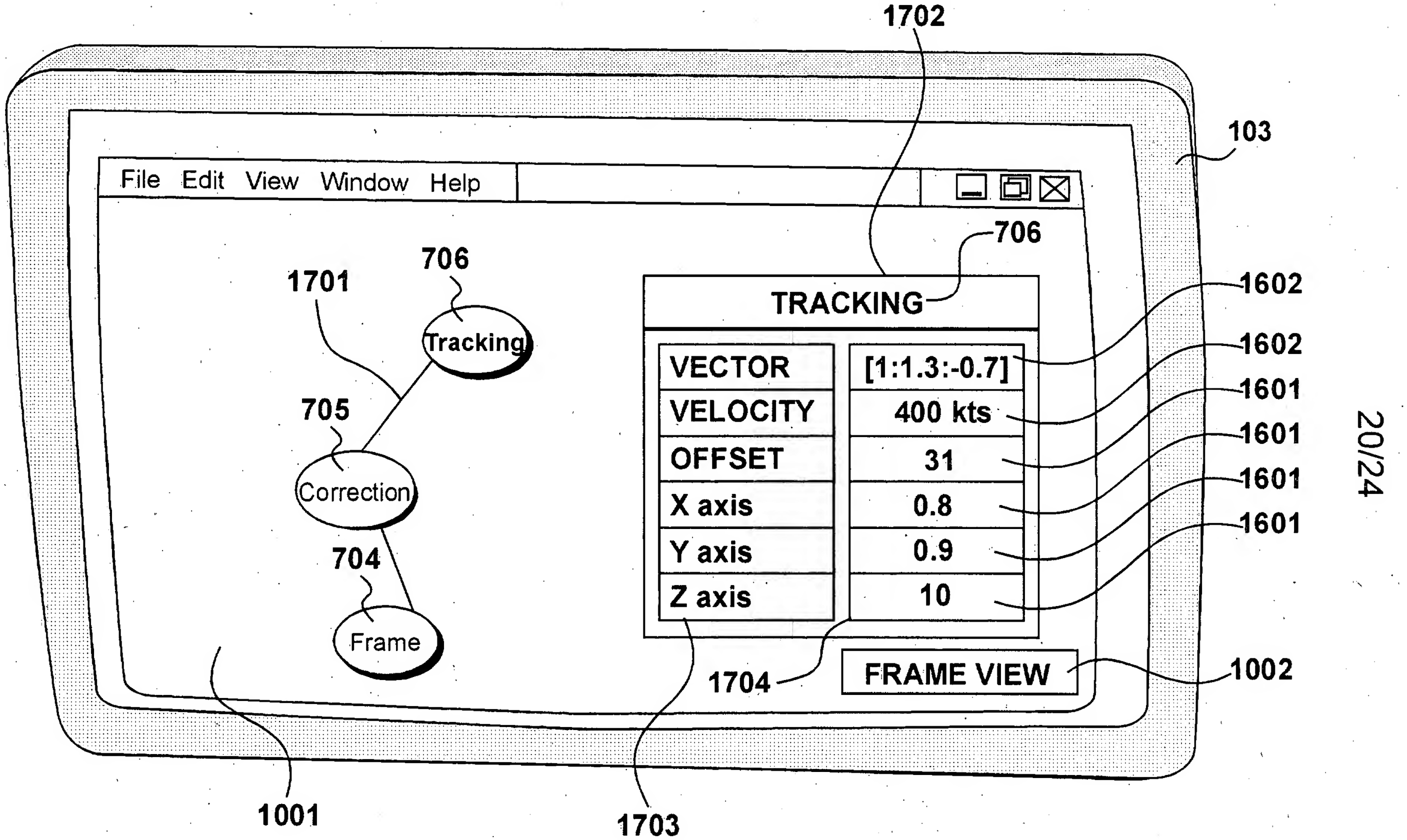
1702
103
File Edit View Window Help
706
1701
706
Tracking
705
Correction
704
Frame
TRACKING
VECTOR
[1:1.3:-0.7]
VELOCITY
400 kts
OFFSET
31
X axis
0.8
Y axis
0.9
Z axis
10
1602
1602
1601
1601
1601
1601
1704
FRAME VIEW
1002
1001
1703

Figure 17

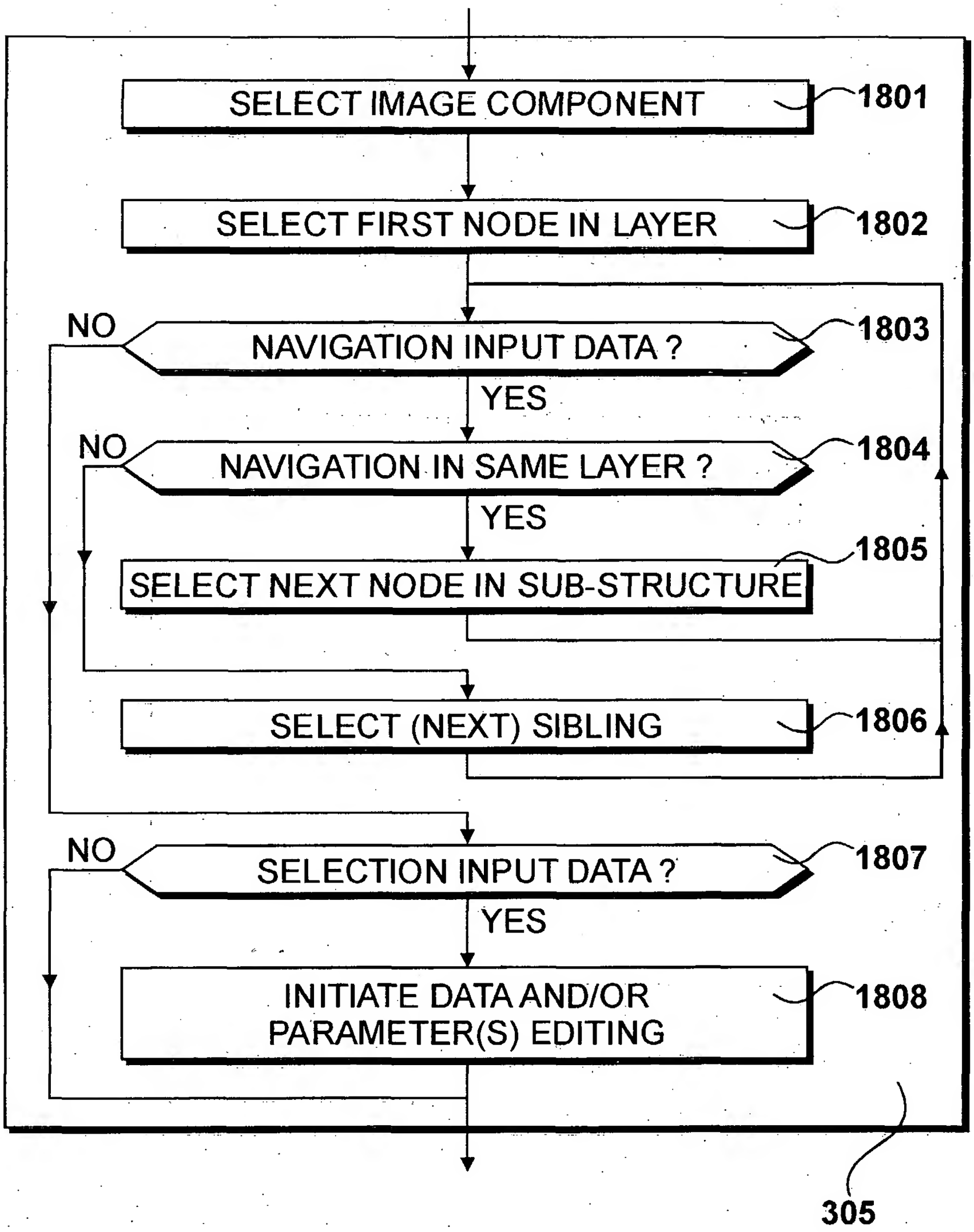
SELECT IMAGE COMPONENT
1801
SELECT FIRST NODE IN LAYER
1802
NO
NAVIGATION INPUT DATA ?
1803
YES
NO
NAVIGATION IN SAME LAYER ?
1804
YES
SELECT NEXT NODE IN SUB-STRUCTURE
1805
SELECT (NEXT) SIBLING
1806
NO
SELECTION INPUT DATA ?
1807
YES
INITIATE DATA AND/OR PARAMETER(S) EDITING
1808
305

*Figure 18*

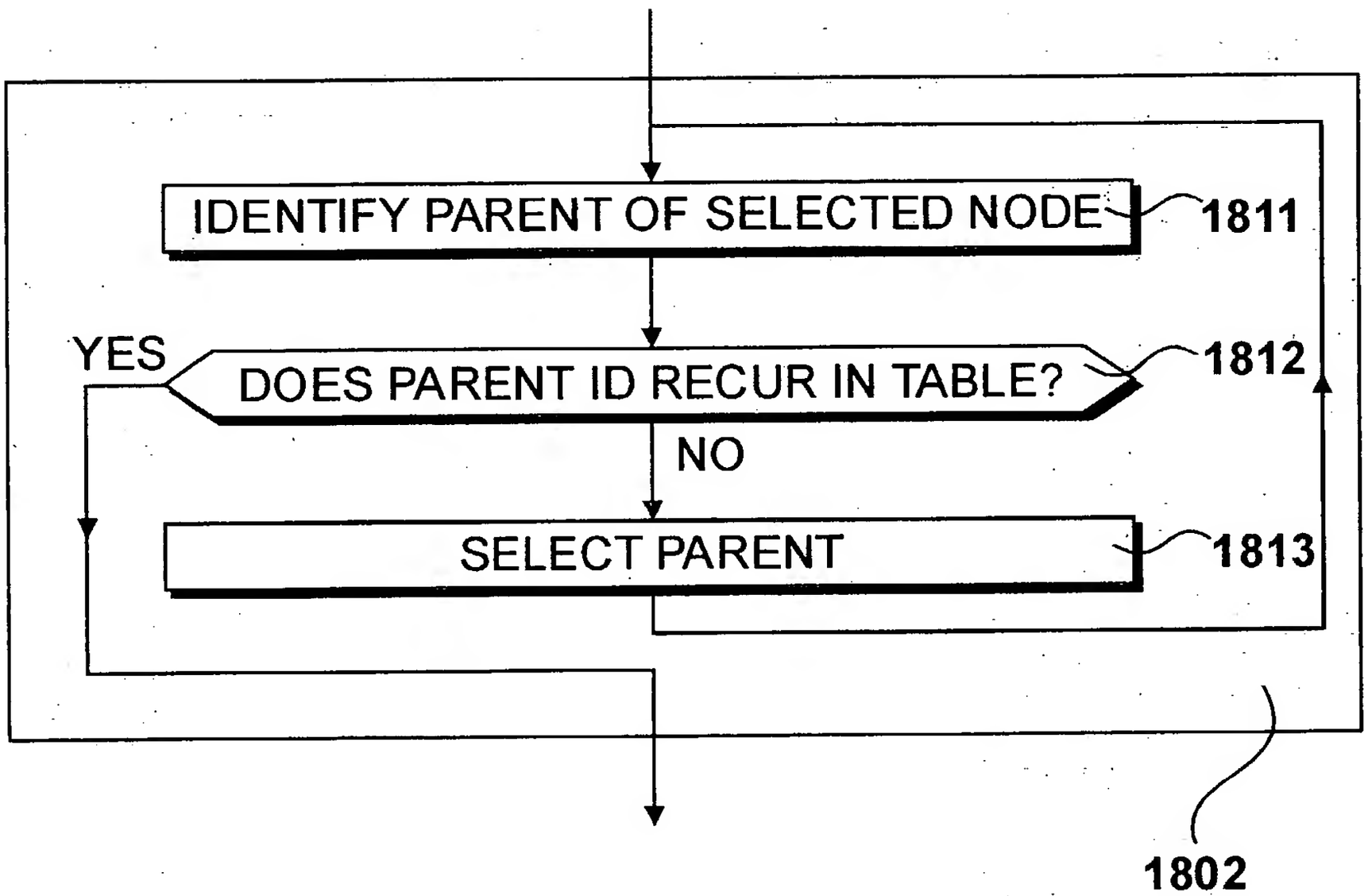
IDENTIFY PARENT OF SELECTED NODE
1811
YES
DOES PARENT ID RECUR IN TABLE?
1812
NO
SELECT PARENT
1813
1802

*Figure 18A*

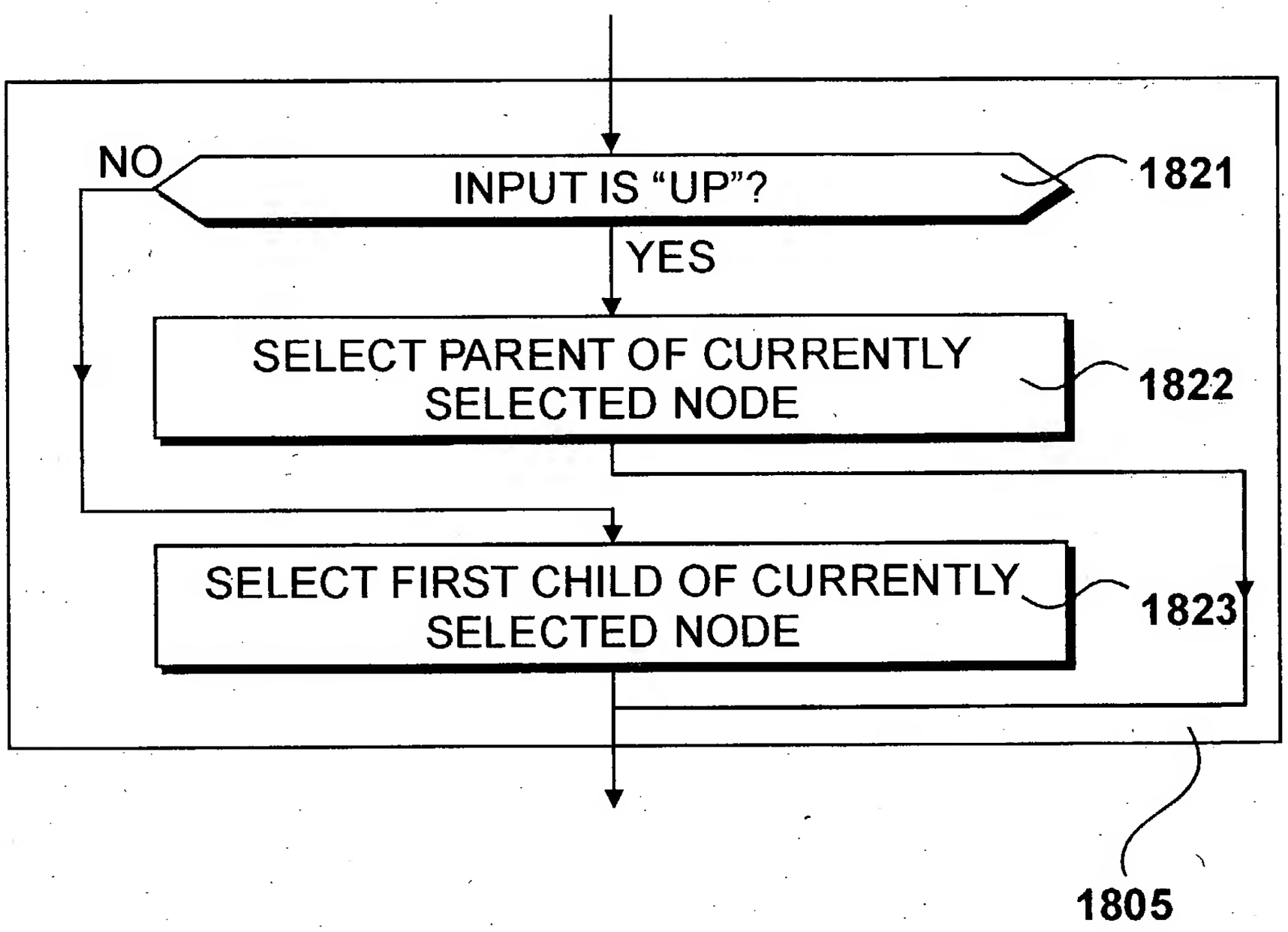
NO
INPUT IS "UP"?
1821
YES
SELECT PARENT OF CURRENTLY SELECTED NODE
1822
SELECT FIRST CHILD OF CURRENTLY SELECTED NODE
1823
1805

*Figure 18B*

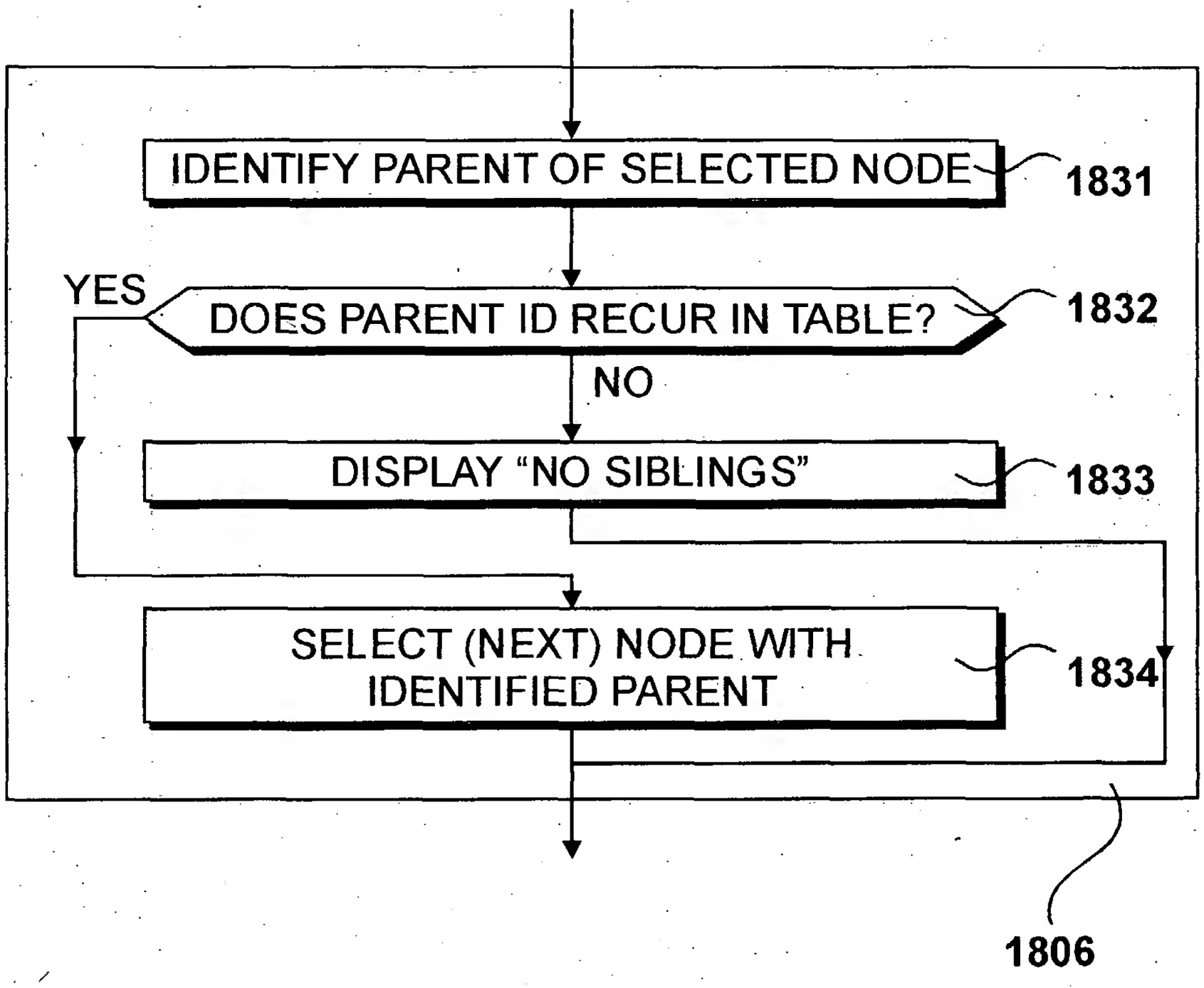
IDENTIFY PARENT OF SELECTED NODE
1831
YES
DOES PARENT ID RECUR IN TABLE?
1832
NO
DISPLAY "NO SIBLINGS"
1833
SELECT (NEXT) NODE WITH IDENTIFIED PARENT
1834
1806

*Figure 18C*